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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,957	03/16/2001	Hisao Hayashi	SON-2050	5303

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EXAMINER

LEWIS, MONICA

ART UNIT

PAPER NUMBER

2822

10

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/808,957	Applicant(s) HAYASHI, HISAO	
	Examiner Monica Lewis	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>10</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. This office action is in response to the amendment filed November 20, 2002.

Response to Arguments

2. Applicant's arguments with respect to claims 22-49 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "pixel array" and "electroluminescence display" must be shown or the feature(s) canceled from the claim(s) (See Claims 32, 36, 41 and 45). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The "manufacturing substrate" has been claimed however it has been removed. (See Claims 22, 23, 29, 30, 32, 33, 38, 39, 41, 42, 47 and 48). For example, if it has been removed how can an adhesive layer be formed between a first surface and the manufacturing substrate. Claims 24-28, 31, 34-37, 40, 43-46 and 49 depend directly or indirectly from a

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rejected claim and are, therefore, also rejected under 35 U.S.C. 112, second paragraph for the reasons set above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22 and 24-27, as far as understood, are rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348).

In regards to claim 22, Kwak et al. ("Kwak") discloses the following:

a) a product substrate (31) and a thin film device (33, 35, 37, 41 and 43) (See Figure 4 and Page 4 Lines 3-6); and

b) product substrate is one of an organic material and a metal, wherein said product substrate has a first side and a second side opposed to said first side (See Page 10 Lines 20-22).

In regards to claim 22, Kwak fails to disclose the following:

a) manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said thin film device.

However, the limitation of "manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said thin film device" makes it a product by process claim. The MPEP § 2113, states, "Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is

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unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "*product by process*" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "*product by, all of*" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

In regards to claim 24, Kwak discloses the following:

a) thin film device is a thin film transistor (See Page 4 Lines 3-6).

In regards to claim 25, Kwak discloses the following:

a) metal is aluminum (See Page 10 Lines 20-22).

In regards to claim 26, Kwak discloses the following:

a) organic material is a plastic (See Page 10 Lines 20-24).

In regards to claim 27, Kwak discloses the following:

a) a moisture-proof buffer film is formed between said second surface and said thin film device (See Figure 4).

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8. Claim 28, as far as understood, is rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348) in view of Hoffend, Jr. et al. (U.S. Publication No. 2002/0164535).

In regards to claim 28, Kwak fails to disclose the following:

a) plastic is from the group comprising polyether sulfone resin, polyethylene terephthalate resin and ARTON resin.

However, Hoffend, Jr. et al. ("Hoffend, Jr.") discloses polyethylene terephthalate resin (See Page 8 Paragraph 71). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include polyethylene terephthalate resin as disclosed in Hoffend, Jr. because it is substantially transmissive to visible light (See Page 8 Paragraph 71).

Additionally, since Kwak and Hoffend, Jr. are both from the same field of endeavor, the purpose disclosed by Hoffend, Jr. would have been recognized in the pertinent art of Kwak.

9. Claims 31, as far as understood, is rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348) in view of Bae (U.S. Patent No. 6,458,613).

In regards to claim 31, Kwak fails to disclose the following:

a) adhesive layer is from the group comprising a polyimide, Teflon resin, silicon, germanium and metal.

However, Bae discloses an adhesive made of silicon (See Column 1 Lines 62-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include silicon as disclosed in Bae because it has a good adhesive property (See Page 1 Lines 62-65).

Additionally, since Kwak and Bae are both from the same field of endeavor, the purpose disclosed by Bae would have been recognized in the pertinent art of Kwak.

10. Claims 32, 34-36, 41 and 43-45, as far as understood, are rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348) in view of Leventis et al. (U.S. Patent No. 5,189,549).

In regards to claim 32, Kwak et al. ("Kwak") discloses the following:

a) a product substrate (31) (See Figure 4); and

b) product substrate is one of an organic material and a metal, wherein said product substrate has a first side and a second side opposed to said first side (See Page 10 Lines 20-22).

In regards to claim 32, Kwak fails to disclose the following:

a) a pixel array.

However, Leventis et al. ("Leventis") discloses a pixel array (See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include a pixel array as disclosed in Leventis because it aids in displaying information (See Column 1 Lines 11-13).

Additionally, since Kwak and Leventis are both from the same field of endeavor, the purpose disclosed by Leventis would have been recognized in the pertinent art of Kwak.

b) manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said pixel array.

However, the limitation of "manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said pixel array" makes it a product by process claim. The MPEP § 2113, states, "Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability

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of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "*product by process*" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "*product by, all of*" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

In regards to claims 34 and 43, Kwak discloses the following:

a) metal is aluminum (See Page 10 Lines 20-22).

In regards to claims 35 and 44, Kwak discloses the following:

a) organic material is a plastic (See Page 10 Lines 20-24).

In regards to claims 36 and 45, Kwak discloses the following:

a) a moisture-proof buffer film is formed between said second surface and said thin film device (See Figure 4).

In regards to claim 41, Kwak et al. ("Kwak") discloses the following:

a) a product substrate (31) (See Figure 4); and

b) product substrate is one of an organic material and a metal, wherein said product substrate has a first side and a second side opposed to said first side (See Page 10 Lines 20-22).

In regards to claim 41, Kwak fails to disclose the following:

a) an electroluminescence device.

However, Leventis discloses an electroluminescence device (See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include an electroluminescence device as disclosed in Leventis because it aids in displaying information (See Column 1 Lines 11-18).

Additionally, since Kwak and Leventis are both from the same field of endeavor, the purpose disclosed by Leventis would have been recognized in the pertinent art of Kwak.

b) manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said electroluminescence device.

However, the limitation of "manufacturing substrate is removed to expose said first side, thereby leaving said product substrate and said electroluminescence device" makes it a product by process claim. The MPEP § 2113, states, "Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "product by, all

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of" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

11. Claims 37 and 46, as far as understood, are rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348) in view of Hoffend, Jr. et al. (U.S. Publication No. 2002/0164535).

In regards to claims 37 and 46, Kwak fails to disclose the following:

a) plastic is from the group comprising polyether sulfone resin, polyethylene terephthalate resin and ARTON resin.

However, Hoffend, Jr. discloses polyethylene terephthalate resin (See Page 8 Paragraph 71). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include polyethylene terephthalate resin as disclosed in Hoffend, Jr. because it is substantially transmissive to visible light (See Page 8 Paragraph 71).

Additionally, since Kwak and Hoffend, Jr. are both from the same field of endeavor, the purpose disclosed by Hoffend, Jr. would have been recognized in the pertinent art of Kwak.

12. Claims 40 and 49, as far as understood, are rejected under 35 U.S.C. 103(a) as obvious over Kwak et al. (Korean Publication No. 2001066348) in view of Bae (U.S. Patent No. 6,458,613).

In regards to claims 40 and 49, Kwak fails to disclose the following:

a) adhesive layer is from the group comprising a polyimide, Teflon resin, silicon, germanium and metal.

However, Bae discloses an adhesive made of silicon (See Column 1 Lines 62-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Kwak to include silicon as disclosed in Bae because it has a good adhesive property (See Page 1 Lines 62-65).

Additionally, since Kwak and Bae are both from the same field of endeavor, the purpose disclosed by Bae would have been recognized in the pertinent art of Kwak.

Conclusion

13. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: a) Shigeno et al. (U.S. Patent No. 5,830,542) discloses a liquid crystal display device; b) Shimizu et al. (U.S. Patent No. 6,067,135) discloses a liquid crystal display device; and c) Yamazaki et al. (U.S. Patent No. 6,218,702) discloses microcrystal silicon film.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 703-305-3743.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 703-308-4905. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML

March 7, 2003


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